L Number	Hits	Search Text	DB	Time stamp
35	1290	(base and drain and source and emitter and (channel with concentration))	USPAT; US-PGPUB; EPO; JPO; IBM TDB	2005/01/04 17:53
36	132	((base and drain and source and emitter and (channel with concentration))) and (concentration with constant)	USPĀT; US-PGPUB; EPO; JPO;	2005/01/04 17:53
37	10	(US-6060731-\$ or US-6501128-\$ or US-5536961-\$ or US-5489787-\$ or US-6303410-\$ or US-6001678-\$ or US-5895939-\$ or US-4967243-\$ or US-4441117-\$ or US-6670658-\$).did.	IBM_TDB USPAT	2005/01/04 17:53
38	129	(((base and drain and source and emitter and (channel with concentration))) and (concentration with constant)) not ((US-6060731-\$ or US-6501128-\$ or US-5536961-\$ or US-5489787-\$ or US-6303410-\$ or US-6001678-\$ or US-5895939-\$ or US-4967243-\$ or US-4441117-\$ or US-6670658-\$).did.)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2005/01/04 17:53
39	93	(((base and drain and source and emitter and (channel with concentration))) and (concentration with constant)) not ((US-6060731-\$ or US-6501128-\$ or US-5536961-\$ or US-5489787-\$ or US-6303410-\$ or US-6001678-\$ or US-5895939-\$ or US-4967243-\$ or US-4441117-\$ or US-6670658-\$).did.)) and (collector and gate and (insulat\$4 or dielectric))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2005/01/04 17:54
40	69	(((((base and drain and source and emitter and (channel with concentration))) and (concentration with constant)) not ((US-6060731-\$ or US-6501128-\$ or US-5536961-\$ or US-5489787-\$ or US-6303410-\$ or US-6001678-\$ or US-5895939-\$ or US-4967243-\$ or US-4441117-\$ or US-6670658-\$).did.)) and (collector and gate and (insulat\$4 or dielectric))) and (impurity adj concentration)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2005/01/04 17:56
41	68	(((((base and drain and source and emitter and (channel with concentration))) and (concentration with constant)) not ((US-6060731-\$ or US-6501128-\$ or US-5536961-\$ or US-5489787-\$ or US-6303410-\$ or US-6001678-\$ or US-5895939-\$ or US-4967243-\$ or US-4441117-\$ or US-6670658-\$).did.)) and (collector and gate and (insulat\$4 or dielectric))) and (impurity adj concentration)) and electrode	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2005/01/04 17:56
42	48	(((((((base and drain and source and emitter and (channel with concentration))) and (concentration with constant)) not ((US-6060731-\$ or US-6501128-\$ or US-5536961-\$ or US-5489787-\$ or US-6303410-\$ or US-6001678-\$ or US-5895939-\$ or US-4967243-\$ or US-4441117-\$ or US-6670658-\$).did.)) and (collector and gate and (insulat\$4 or dielectric))) and (impurity adj concentration)) and electrode) and (trench or buried)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2005/01/04 17:56

		112004000000	T	100011051
_	1	"20040089886"	USPAT;	2004/07/11
		·	US-PGPUB;	19:56
			EPO; JPO;	
1_	2	"6670658"	IBM_TDB ·	2004/07/11
		0070030	US-PGPUB;	2004/07/11
	1		EPO; JPO;	19:56
	ł		IBM TDB	
_	5	"6495871"	USPAT;	2004/07/11
		0453071	US-PGPUB;	19:56
			EPO; JPO;	19.30
			IBM TDB	
l _	21	Hattori-hidetaka.in.	USPAT;	2004/07/11
		ind boll indd bund illi	US-PGPUB;	19:56
			EPO; JPO;	13.30
			IBM TDB	
_	0	6670658.URPN.	USPAT	2004/07/11
	1		001111	19:56
-	9266	("IGBT" or (insulat\$3 adj gate adj	USPAT;	2004/07/11
1		bibolar adj transistor) and (channel with	US-PGPUB;	19:56
		(concentration with constant or equal)))	EPO; JPO;	• • •
1		,	IBM TDB	
-	38	("IGBT" or (insulat\$3 adj gate adj	USPAT;	2004/07/11
		bibolar adj transistor)) and (channel	US-PGPUB;	19:56
		with (concentration with (constant or	EPO; JPO;	1
		equal)))	IBM TDB	
-	48		USPAT;	2004/07/11
		bibolar adj transistor)) and (channel	US-PGPUB;	19:56
		with (concentration with (constant or	EPO; JPO;	
	·	equal\$5 or similar or equival\$4)))	IBM TDB	
-	38		USPAT;	2004/07/11
		bibolar adj transistor)) and (channel	US-PGPUB;	19:57
:		with (concentration with (constant or	EPO; JPO;	
		equal\$5 or similar or equival\$4)))) not	IBM_TDB	
		("20040089886" "6670658" "6495871"	_	
		Hattori-hidetaka.in. (("5895939").PN.)		
		((("5895939").PN.) and ((impurity adj		
		concentration) or concentration))		
		(("4967243"   "5471072"   "5543637").PN.)		
		(("3391311"   "4441117"   "4521795"		
		"4605948"   "4641174"   "4783693").PN.)		
		4967243.URPN. (Hattori-hidetaka.in. and		
		(base and drain and (source or emitter)		
		and (impurity adj concentration)))		
_	22	6495871.URPN.)	IICDAM.	2004/07/11
ļ <sup>-</sup>	23	((("IGBT" or (insulat\$3 adj gate adj	USPAT;	2004/07/11
		bibolar adj transistor)) and (channel	US-PGPUB;	19:57
		<pre>with (concentration with (constant or equal\$5 or similar or equival\$4)))) not</pre>	EPO; JPO;	
		("20040089886" "6670658" "6495871"	IBM_TDB	
		Hattori-hidetaka.in. (("5895939").PN.)		
		((("5895939").PN.) and ((impurity adj		
		concentration) or concentration))		
		(("4967243"   "5471072"   "5543637").PN.)		
		(("3391311"   "4441117"   "4521795"		
		"4605948"   "4641174"   "4783693").PN.)		
i		4967243.URPN. (Hattori-hidetaka.in. and		
		(base and drain and (source or emitter)		
		and (impurity adj concentration)))		
1		6495871.URPN.)) and (gate and (collector		
		or drain) and base and (emilter or		
		source))		
L	·		L	

_	15	(((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) (("5895939").PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration)) ("5895939").PN.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/11 19:57 2004/07/11 19:57
_	1	(("5895939").PN.) and ((impurity adj	US-PGPUB; EPO; JPO; IBM_TDB USPAT;	2004/07/11
,		concentration) or concentration)	US-PGPUB; EPO; JPO; IBM_TDB	19:57
-	3	("4967243"   "5471072"   "5543637").PN.	USPAT	2004/07/11   19:57
-	6	("3391311"   "4441117"   "4521795"     "4605948"   "4641174"   "4783693").PN.	USPAT	2004/07/11 19:57
-	16		USPAT	2004/07/11 19:57
-	6	Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))	USPAT; US-PGPUB; EPO; JPO; IBM TDB	2004/07/11 19:57
-	1	"20010026977"	USPAT; US-PGPUB; EPO; JPO; IBM TDB	2004/07/11 19:57
-	1	"5895939".PN.	USPAT	2004/07/11 19:57
-	1	"5895939".PN.	USPAT	2004/07/11 19:57
-	1	6495871.URPN.	USPAT	2004/07/11 19:57
_	12	((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) (("5895939").PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source)) and (channel with (impurity adj concentration))) and trench ("4672407"   "4990975"   "5151762"	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/07/11 20:16
_	13	"5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.	OSPAI	19:59
-	1	6501128.URPN.	USPAT	2004/07/11 20:00

-	4	("5173435"   "6001678"   "6380586"	USPAT	2004/07/11
		[ "6501128").PN.		20:01
-	0	6605858.URPN.	USPAT	2004/07/11
				20:03
-	12	(("4672407"   "4990975"   "5151762"	USPAT;	2004/07/11
}		"5173435"   "5250449"   "5378911"	US-PGPUB;	20:03
		"5545908"   "5701023"   "5914503"	EPO; JPO;	
		"6037628"   "6169299"   "6238980"	IBM_TDB	
		".6303410").PN.) and concentration	шаръш.	2004/07/11
-	8	((("4672407"   "4990975"   "5151762"     "5173435"   "5250449"   "5378911"	USPAT;	2004/07/11
		"5545908"   "5701023"   "5914503"	US-PGPUB; EPO; JPO;	20:04
		"6037628"   "6169299"   "6238980"	IBM TDB	
		"6303410").PN.) and concentration) and	1011_100	
		(channel with (concentration))		
_	3		USPAT;	2004/07/11
		bibolar adj transistor)) and (channel	US-PGPUB;	20:13
		with (concentration with (constant or	EPO; JPO;	
		equal\$5 or similar or equival\$4)))) not	IBM TDB	
		("20040089886" "6670658" "6495871"	···	
	,	Hattori-hidetaka.in. (("5895939").PN.)		
		((("5895939").PN.) and ((impurity adj		
		concentration) or concentration))		
		(("4967243"   "5471072"   "5543637").PN.)		
		(("3391311"   "4441117"   "4521795"	,	
		"4605948"   "4641174"   "4783693").PN.)		
		4967243.URPN. (Hattori-hidetaka.in. and		
		(base and drain and (source or emitter)		*
!		and (impurity adj concentration)))		
		6495871.URPN.)) and (gate and (collector or drain) and base and (emilter or		1
		source))) and (channel with (impurity adj		
		concentration))) not ((((("IGBT" or		
		(insulat\$3 adj gate adj bibolar adj		
		transistor)) and (channel with		
İ		(concentration with (constant or equal\$5	ľ	
		or similar or equival\$4)))) not		
		("20040089886" "6670658" "6495871"		
		Hattori-hidetaka.in. (("5895939").PN.)		
		((("5895939").PN.) and ((impurity adj		
		concentration) or concentration))		
		(("4967243"   "5471072"   "5543637").PN.)		
		(("3391311"   "4441117"   "4521795"		
		"4605948"   "4641174"   "4783693").PN.)   4967243.URPN. (Hattori-hidetaka.in. and		
		(base and drain and (source or emitter)		
		and (impurity adj concentration)))		
,		6495871.URPN.)) and (gate and (collector		
		or drain) and base and (emitter or		
		source))) and (channel with (impurity adj		
		concentration))) and trench)		
-	48	(("IGBT" or (insulat\$3 adj gate adj	USPAT;	2004/07/11
	,	bibolar adj transistor)) and (channel	US-PGPUB;	20:18
		with (concentration with (constant or	EPO; JPO;	•
		equal\$5 or similar or equival\$4))))	IBM TDB	

26    (("1087" or (insulat83 adj gate adj bibolar adj transistor) and (channel with (concentration with (constant or equal85 or similar or equival84)))) not ("2004008986" "6670658" "649871" or (insulat33 adj gate adj bibolar adj transistor) and (channel with (concentration with (constant or equal85 or similar or equival84)))) not ("200400886" "6670658" "649871" or ("200400886" "6670658" 569387].PM.) ("2004008868" "6670658" 569387].PM.) ("2004008868" "6670658" 569387].PM.) ("2004008868" "6670658" 569387].PM.) ("395131"   "64117"   "4521795"   "4605948"   "764117"   "47838937].PM.) ("3967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) 659128.URPN. (57534387   "601678"   "5770102"   "3950975"   "5515702"   "5515702"   "5515702"   "5515702"   "5515702"   "5515702"   "570102"   "390975"   "570102"   "390975"   "570102"   "390975"   "570102"   USPAT: US			•		
with (concentration with (constant or equial\$5 or similar or equival\$4])) not ("2004008986" "6670658" "6498871"   Hattori-hidetaka.in. ((((("("10R" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equial\$5 or similar or equival\$4]))) not ("20040089866" "6670658" "6498871"   Hattori-hidetaka.in. ("\$9895939").PN.) (("\$9895939").PN.) and ((impurity adj concentration)) ("4967243"   "5471072"   "5534537").PN.) (("3967243"   "5471072"   "5534537").PN.) ("391311"   "4441171"   "4783693").PN.) (4967243.URPN.) and (gate and (collector or drain) and base and (emilter or source))) and (channel with (impurity adj concentration))) (495871.URPN.)) and (gate and (collector or drain) and base and (emilter or source)) and (channel with (impurity adj concentration)) and created (collector or drain) and base and (emilter or source)) and (channel with (impurity adj concentration)) and created (collector or source)) and (channel with (impurity adj concentration)) and (channel with (source) ("460899"   "5578991"   "557891"   "557891"   "557891"   "5501128", PS.) ((("1768" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration) ("("10R" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration) and (channel with (concentration) or concentration)) (("5989593").PN.) (("5989593").PN.) (("398938").PN.) (("3989	-	26	((("IGBT" or (insulat\$3 adj gate adj	USPAT;	2004/07/11
equals5 or similar or equivals()))	ł		bibolar adj transistor)) and (channel	US-PGPUB;	20:17
("20040089886" "6670658" "6495871"				EPO; JPO;	i
Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equia\$5 or similar or equiva\$14)))) not ("2004008986" "66706558" "6495871"   Hattori-hidetaka.in. ("5895939").PN.) ((("5895939").PN.) ((("5895939").PN.) ((("5895939").PN.) (("3891311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783639").PN.) (("3391311"   "4441117"   "4783639").PN.) (4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "551762"   "5173435"   "601678"   "5701023"   "5914503"   "633628"   "6169299"   "6238980"   "633410").PN.) (6501128.URPN. (("5173435"   "6001678"   USPAT; US-PGPUB, Emoty of the contentration with (contentration with (contentration or equival\$4)))) not ("20040089886"   "66706565" "6495871"   Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equival\$4)))) not ("20040089886"   "66706568" "6495871"   Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration) ("("("1977"   "543637").PN.) (("3993311"   "444117"   "4521795"   "4605948"   "6704008988"   "66706588"   495871"   Hattori-hidetaka.in. (("5995939").PN.) (("3993311"   "444117"   "4783693").PN.) (("3993711"   "444117"   "4783693").PN.) (("3993711"   "544117"   "4783693").PN.) (("3993711"   "5514501"   "3784598"   "37501023"   "5914501"   "37501023"   "5914501"   "37501023"   "5914501"   "37501023"   "5914501"   "37501023"   "5914501"   "37501023"   "5914501"   "37501023"   "5914501"   "37501023"   "5914501"			equal\$5 or similar or equival\$4))))) not	IBM TDB	
Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equia\$5 or similar or equiva\$14)))) not ("2004008986" "66706558" "6495871"   Hattori-hidetaka.in. ("5895939").PN.) ((("5895939").PN.) ((("5895939").PN.) ((("5895939").PN.) (("3891311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783639").PN.) (("3391311"   "4441117"   "4783639").PN.) (4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "551762"   "5173435"   "601678"   "5701023"   "5914503"   "633628"   "6169299"   "6238980"   "633410").PN.) (6501128.URPN. (("5173435"   "6001678"   USPAT; US-PGPUB, Emoty of the contentration with (contentration with (contentration or equival\$4)))) not ("20040089886"   "66706565" "6495871"   Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equival\$4)))) not ("20040089886"   "66706568" "6495871"   Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration) ("("("1977"   "543637").PN.) (("3993311"   "444117"   "4521795"   "4605948"   "6704008988"   "66706588"   495871"   Hattori-hidetaka.in. (("5995939").PN.) (("3993311"   "444117"   "4783693").PN.) (("3993711"   "444117"   "4783693").PN.) (("3993711"   "544117"   "4783693").PN.) (("3993711"   "5514501"   "3784598"   "37501023"   "5914501"   "37501023"   "5914501"   "37501023"   "5914501"   "37501023"   "5914501"   "37501023"   "5914501"   "37501023"   "5914501"   "37501023"   "5914501"   "37501023"   "5914501"				_	
(insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871" Hattori—hidetaka.in. ("5895939").PN.) (("5895939").PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPM. (Hattori—hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPM.)) and (gate and (collector or drain) and hase and (emiter or source)) and (channel with (impurity adj concentration))) and trench) ("467240""   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5918503"   "6037628"   "6168299"   "6238980"   "6303410").PN.) 650112.URPM. ("5173435"   "6001678"   "6380586"   "650128").PN.)) 6112.URPM. ("5173435"   "6001678"   "6380586"   "6505128").PN.) (("10SF" or (insulat33 adj gate adj bibolar adj transistor)) and (channel ut) ("200400089886" "66706585" "6495871" Hattori—hidetaka.in. ("(("("GBT" or (insulat33 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4 ))) not ("20040089886" "66706585" "6495871" Hattori—hidetaka.in. ("("("GBT" or (insulat33 adj gate adj bibolar adj transistor)) and (channel with (concentration) or concentration) ("("4967243" " "5471072"   "5543637").PN.) (("3993131"   "444117"   "4521795"   "469078"   "844117"   "4521795"   "469078"   "844117"   "47820793").PN.) 4967243.URPM. (Hattori—hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPM.)) and (gate and (collector or drain) and base and (emiter or source)) and (channel with (impurity adj concentration))) and trench) (("4672407"   "499075"   "5514502"   "51762"   "5173628"   "5701023"   "5914503"   "6001678"   "5701023"   "5914503"   "6001678"			Hattori-hidetaka.in. ((((("IGBT" or		
transistor)) and (channel with (concentration with (constant or equial\$5 or similar or equival\$4)))) not ("20040089886" [66705658" 6495871" Hattori-hidetaka.in. ("5895939").PN.) (("5895939").PN.) and ((impurity adj concentration)) or concentration)) ("4967243" ["5471072" ["5543637"].PN.) ("391311"  "4441117"  "4521795"   "4605948"  "4641174"  "4783639"].PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"  "551762"  "5173435"   "601678"   "5701023"  "5914503"  "630410"].PN.) 6501128.URPN. ("5173435"  "601678"   "6380586"  "6501128.URPN.) (("("IGRT" or (insulat33 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886"  "66706585" "6495871" Hattori-hidetaka.in. ((((("IGRT" or (insulat33 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("("("S895939").PN.) and (("S895939").PN.) and (("S895939").PN.) (("("S895939").PN.) (("("S895939").PN.) (("("S895939").PN.) (("("S89593").PN.) (("391311"  "4441117"  "4521795"   "4605948"  "4641174"  "4783693").PN.) (("391311"  "4441117"  "4521795"   "4605948"  "4641174"  "4783693").PN.) (("3993731"  "444117"  "4783693").PN.) (("39937311"  "444117"  "4783693").PN.) (("4672407"  "459075"  "5914503"  "462070"  "4702407"  "499075"  "5514503"  "6303410").PN.) (650128.URPN.)) and (pate and (collector or drain) and base and (emitter or source))) and channel with (impurity adj concentration))) and trench) (("4672407"  "4990975"  "5514503"  "6303410").PN.) (650128.URPN.)) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"  "4799075"  "5514503"  "630628"  "6306240"  "6306440"  "650128.URPN.) ("650128.UR		1 .	(insulat\$3 adj gate adj bibolar adj		
(concentration with (constant or equals5 or similar or equivals4)))) not ("2004008986" "6670658" "6495871" Hattori-hidetakain. ("5595939"). PN.) ((("5955939"). PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) (4967243.URPN. (Hattori-hidetaka in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiter or source)) and (channel withinpurity adj concentration) ("4672407"   "999975"   "5151462" "5174435"   "5250489" "5378912" "5517435"   "5250499" "5378912" "5517435"   "6001678"   "6169299" "523880" "6303410").PN.) (6501128.URPN. (("5173435"   "6001678"   "6380586"   "6501128.URPN. (("5173435"   "6001678"   "8701023"   "914503"   "6001678"   "8701023"   "914503"   "6001678"   "8701023"   "914503"   "80010478"   "8701023"   "914503"   "80010478"   "8701023"   "914503"   "80010478"   "8701023"   "914503"   "80010478"   "8701023"   "914503"   "80010478"   "8701023"   "914503"   "8001078"   "8701023"   "914503"   "8001078"   "8701023"   "914503"   "8001078"   "8701078"   "8701023"   "8701					
or similar or equival(4)()) not ("2004008986" "6670658" "6495871" Hattori-hidetaka.in. (("5895939"). PN.) (("5895939"). PN.) and ((impurity adj concentration)) or concentration)) (("4967243"   "5471072"   "545437").PN.) (("3391311"   "4441117"   "47821795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495671.URPN.)) and (gate and (collector or drain)) and base and (emiter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "49990975"   "5151762"   "5173435"   "5250449"   "5378911"   "554908"   "57701023"   "5914503"   "6037628"   "6390886"   "6303688"   "6303688"   "6303688"   "6303688"   "6303688"   "6303688"   "630410").PN.) 6501128.URPN. (("5173435"   "6001678"   USPAT; USPAT; USPAT) (((("16BT" or (insulat3) adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equivals))) not ("20040089886" "6670658" "6495871"   Hattori-hidetaka.in. ((((("16BT" or (insulat3) adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equivals) or similar or equivals))) (("19676391"   "6495871"   Hattori-hidetaka.in. ((((("16BT" or (insulat3) adj gate adj bibolar adj transistor)) and (channel with (concentration) or concentration) (("3091311"   "444117"   "4521795"   "4503484"   4641174"   "4786937").PN.) (("3391311"   "444117"   "4521795"   "554908"   "4659871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "51743455"   "5250449"   "5378911"   "5545908"   "57501023"   "5914503"   "5030420"   PN.) (501128.URPN.) ("51752"   "51743455"   "5250499"   "528990"   "6303628"   "6169299"   "623890"   "6303628"   "6169299"   "623890"   "6303410").PN.) (501128.URPN.) ("5175201315"   "5001678"   "5001128.URPN.) ("5001678"   "5001128.URPN.) ("5001678"   "5001128.URPN.) ("5001678"   "5001678"   "5001678			1		
("20040089866" "6670658" "6495871"  Hattori-hidetaka in. ("("5895939"). PN.) ((("5895939"). PN.) and ((impurity adj concentration)) (("4967243"   "5471072"   "5543637"). PN.) (("3391311"   "444117"   "473693"). PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiter or source))) and (channel with (impurity adj concentration))) 15 (1976787"   "5151762"   "5174345"   "6001678"   "57501023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410"). PN.) 6501128.URPN. (("517878).) and (channel with (impurity adj concentration))) and trench (("4672407"   "4990975"   "5151762"   "5173628"   "6169299"   "6238980"   "6303410"). PN.) 6501128.URPN. (("517878).)   "6001678"   "6380686"   "650128"). PN.)) 15 ((("16BT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equival\$41))) not ("20040089886" "6670658" "6495871"   Hattori-hidetaka.in. ((((("16BT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration) or concentration) or concentration) or concentration) or concentration) (("3965939"). PN.) (("5985939"). PN.) (("5985939"). PN.) (("3985939"). PN.) (("3985939"). PN.) (("3985939"). PN.) (("1391311"   "4441117"   "4783693"). PN.) (("3985938"   "6461174"   "4783693"). PN.) (("3985938"   "6461174"   "4783693"). PN.) (("3985938"   "6461174"   "4783693"). PN.) (("3985938"   "6461174"   "4783693"). PN.) (("3985938"   "3671023"   "5545080"   "5545080"   "55545080"   "55545080"   "55500449"   "5378911"   "5545908"   "5545080"   "5550128.URPN.) (("4173435"   "5001678"   "5550128.URPN.) ("5173435"   "5001678"   "5550128.URPN.) ("51734358"   "5001678"   "5550128.UR					
Hattori-hidetaka.in. (("5895939"), P.N.) (("5895939"), P.N.) and (impurity adj concentration) or concentration) (("4967243"   "541072"   "54543637", P.N.) (("4967243"   "4441117"   "47821795"   "4605948"   "4641174"   "478639", P.N.) 4967243, URPN. (Hattori-hidetaka.in. and (impurity adj concentration))) 6495871.URPN.) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "49990975"   "5151762"   "5173435"   "5701023"   "5914503"   "6037628"   "5701023"   "5914503"   "6037628"   "6308586"   "6303686"   "6303686"   "6303686"   "650128.URPN. (("5173435"   "6001678"   "5800188.URPN. (("5173435"   "6001678"   USPAT; USP		i			
((("\$89593").PN.) and ((impurity adj concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "464174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiter or source))) and (channel with (impurity adj concentration))) ("4990975"   "5151762"   "5173435"   "4990975"   "5151762"   "5173435"   "5550449"   "5378911"   "5545908"   "57501023"   "5914503"   "6031628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6031678"   "6380586"   "650128").PN.)) ((("("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3))) ((("399539").PN.)) ((("399539").PN.)) and ((impurity adj concentration)) or concentration)) (("4967243"   "5471072"   "5543637").PN.) ((("3391311"   "4441171"   "4783693").PN.) ((("3391311"   "4441171"   "4783693").PN.) (("3391311"   "4441171"   "4783693").PN.) (("3391311"   "4441171"   "4783693").PN.) (("3391311"   "4441171"   "4783693").PN.) (("3391311"   "4490375"   "551762"   "5173435"   "3570429"   "5378911"   "5545908"   "55701023"   "5037628"   "550128.URPN. ((Firstriation)) ("6001678"   "550128.URPN. ((Firstriation)).PN.) (50128.URPN. ((Firstriation)).PN.) (50128.URPN. ((Firstriation)).PN.) (50128.URPN. ((Firstriation)).PN.) (50128.URPN. ((Firstriation)).PN.) (50128.URPN. ((Firstriation)).PN.)			1 '		
concentration) or concentration)  (("4967243"   "4541072"   "54543637").PN.) (("4967243"   "4641117"   "4521795"   "4605948"   "4661174"   "4783693").PN.)  4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration)))  6495871.URPN.)) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) and trench) ("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6168299"   "6238808"   "6303410").PN.) 6501128.URPN. ("5173435"   "6001678"   "6380586"   "6501128").PN.))  (((("16TT" or (insulat3) adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. ((((("16BT" or (insulat3) adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (((("16BT" or (insulat3) adj gate adj bibolar adj transistor)) and (channel with (concentration) or concentration)) (("399539").PN.) ((("3895939").PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441171"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration)) and trench) (("4672407"   "499075"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. ((F1573435"   "6001678"		1			
(("4967243"   "5471072"   "5543637").PN.) (("3391311"   "444117"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration)) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source)) and (channel with (impurity adj concentration)) and trench) (("4672407"   "4990375"   "5515762"   "5173435"   "2520449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"   "6380586"   "6501128").PN.)) 6501128.URPN. (("5173435"   "6001678"   "6380586"   "650128").PN.)) (("("GBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equial\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equis)5 or similar or equival\$4)))) not ("2004008986" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) (("\$39939").PN.) and ((impurity adj concentration)) and (simpurity adj concentration)) and (source or emitter) and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiter or source))) and (channel with (impurity adj concentration))) and trench) ("4672407"   "4990975"   "5151762"   "5173435"   "850449"   "5378911"   "5459080"   "85701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303628"   "6169299"   "6238980"   "6037628"   "6169299"   "6238980"   "6037628"   "6169299"   "6238980"   "6037628"   "6169299"   "6238980"   "6037628"   "6169299"   "6238980"   "6037628"   "6169299"   "6238980"   "6037628"   "6169299"   "6238980"   "6037628"   "6169299"   "6238980"   "6037628"   "6169299"   "6238980"   "6037628"   "6169299"   "6238980"   "6037628"   "6169299"   "6238980"   "6037628"   "6169299"   "6238980"   "6037628"   "6169299"   "6238980"   "6037628"   "616929					
(("3391311"   "4441117"   "4521795"   "4605948"   "46411174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source)) and (channel with (impurity adj concentration))) and trench) ("4672407" [ "4990975"   "5151762"   "5173435"   "5750043"   "5914503"   "6037628"   "6769299"   "62389800"   "603410").PN.) 6501128.URPN. ("5173435"   "6001678"   "6380586"   "6501128").PN.)) ((("16BT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("2004008986" "6670658" "6495871" Hattori-hidetaka.in. (("(("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("2004008986" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) (("399131"   "444117"   "4783693").PN.) (("3991311"   "444117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) (("3391311"   "444117"   "4783693").PN.) (4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiter or source))) and (channel with (impurity adj concentration)) and (pate and (collector or drain) and base and (emiter or source))) and (channel with (impurity adj concentration)) and (pate and (collector or drain) and base and (emiter or source))) and (channel with (impurity adj concentration)) and (gate and (collector or drain) and base and (emiter or source))) and (channel with (impurity adj concentration)) and (source or emitter) and (impurity adj concentration)) 6495871.URPN.) ("379831"   "537891"   "5701023"   "5914503"   "60307628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"					
"4605948"   "4641174"   "4783693", P.N.     4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration)))     6495871.URPN.)) and (gate and (collector or drain) and base and (emitter or source)) and (channel with (impurity adj concentration)) and trench) ("4672407"   "4990975"   "5515762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "59145453"   "6037628"   "6169299"   "6238980"   "6303410").P.N.     6501128.URPN. (("5173435"   "6001678"   "6380586"   "6501128").P.N.   (("IGBT" or (insulats) adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equals) for similar or equivals)))) not ("20040089886" "6670658" "6495871"   Hattori-hidetaka.in. (("("IGBT" or (insulats) adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equals) or similar or equivals))) not ("20040089886" "6670658" "6495871"   Hattori-hidetaka.in. (("5895939").P.N.) (("5895939").P.N.) and ((impurity adj concentration)) (("4967243"   "5471072"   "5543637").P.N.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").P.N.) (("3967243"   "5471072"   "5543637").P.N.) (("4672407"   "478369").P.N.) (("4672407"   "478369").P.N.) (("4672407"   "478369").P.N.) (("4672407"   "478369").P.N.) (("4672407"   "4990975"   "5151762"   "5173435"   "55701023"   "5571452"   "5770123"   "5574598"   "5770123"   "5576988"   "5770123"   "5576988"   "5770123"   "5576988"   "6238980"   "6303410").P.N.) (501128.URPN. (("5173435"   "6001678"					·
4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) and trench) ("4672407" [ "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238880"   "63037628"   "630856"   "6501128",PN.)) 6501128.URPN. (("5173435"   "6001678"   "6380586"   "6501128",PN.))					
(base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "633628"   "6169299"   "6238980"   "633400").PN.) (650128.URPN. (("5173435"   "6001678"   "6380586"   "650128").PN.))  - 15 ((("TGBT" or (insulat33 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871"   Hattori-hidetaka.in. ((((("TGBT" or (insulat33 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871"   Hattori-hidetaka.in. ((("IGBT" or (insulat33 adj gate adj bibolar adj transistor)) and (channel with (concentration)) (("3967243"   "5471072"   "5543637").PN.) (("395939").PN.) and ((inspurity adj concentration)) ("49672431"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) (49672431.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (inpurity adj concentration))) (adps871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration)) ("4672407"   "4990975"   "5151762"   "5137435"   "5250449"   "378911"   "5545908"   "5701023"   "5914503"   "63037628"   "5701023"   "5914503"   "63037628"   "5701023"   "5914503"   "63037628"   "6307628"   "6301678"   "650128.URPN.) ("5173435"   "6307628"   "63037628"   "650128.URPN.) ("5173435"   "6001678"   "650128.URPN.) ("650128.URPN.) ("650128.URPN.) ("650128.URPN.) ("650128.URPN					İ
and (impurity adj concentration)) 6495871.URPN.)) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5379911"   "5545908"   "5510023"   "6037628"   "6169299"   "6238980"   "6030410").PN.) 6501128.URPN. (("5173435"   "6001678"   "630386"   "6501128").PN.)) 6501128.URPN. (("5173435"   "6001678"   "630386"   "6501128").PN.)) 650128.URPN. (("5173435"   "6001678"   "620380586"   "6501128").PN.)) 650128.URPN. (("5173435"   "6001678"   USPAT; US-PGPUB; US-		1	l ·		
6495871.URPN.) and (gate and (collector or drain) and base and (emilter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "6303628"   "6169299"   "6238980"   "6303628"   "6306128.URPN. (("5173435"   "6001678"   "6380586"   "6501128".PN.))  - 15 ((("TGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871"   Hattori-hidetaka.in. ((("("TGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871"   Hattori-hidetaka.in. (("("TGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration)) (("("5895939").PN.)) and ((impurity adj concentration)) (("("4967243"   "5471072"   "5543637").PN.)) (("5895939").PN.) and ((impurity adj concentration)) ("4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration)) (495871.URPN.)) and (gate and (collector or drain) and base and (emiter or source))) and (channel with (impurity adj concentration)) ("496871.URPN.)) and (gate and (collector or drain) and base and (emiter or source))) and (channel with (impurity adj concentration))) ("5545908"   "55504498"   "5545908"   "55504498"   "5545908"   "55504998"   "55504998"   "5701023"   "5914503"   "6037628"   "5701023"   "5914503"   "6037628"   "5701023"   "5914503"   "6037628"   "6030			, , , , , , , , , , , , , , , , , , ,		
or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "57701023"   "637628"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"   "6380586"   "65380586"   "6501128").PN.)) (((("16BT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. ((((((("16BT" or (insulat\$3 adj gate adj bibolar adj transistor))) and (channel with (concentration)) and (channel with (concentration) with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) (("5895939").PN.) and ((impurity adj concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "444117"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source)) and (channel with (impurity adj concentration)) ("4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5751023"   "6914503"   "6037628"   "5751023"   "6914503"   "6037628"   "5751023"   "6914503"   "6037628"   "650128.URPN. (("5173435"   "6001678"					1
source)) and (channel with (impurity adj concentration)) and trench) ("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5637628"   "6169299"   "6238980"   "6303410").PN.) (6501128.URPN. ("5173435"   "6001678"   "6380586"   "6501128.URPN. ("5173435"   "6001678"   "6380586"   "6501128."NN.)) ((("("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor!) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871"   Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor!)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871"   Hattori-hidetaka.in. (("("(""G87*07")) and (("3098939").PN.) (("5895939").PN.) (("5895939").PN.) and ((impurity adj concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4783693").PN.) (("3391311"   "4441117"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiter or source))) and (channel with (impurity adj concentration)) ("4990975"   "5151762"   "5173435"   "5250449"   "53789911"   "5545908"   "5751023"   "5914503"   "6037628"   "5751023"   "5914503"   "6037628"   "5751023"   "5914503"   "6034628"   "650128.URPN.) ("("5173435"   "6001678"					
concentration))) and trench) (("4672407"					İ
"4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"   "6380586"   "6501128").PN.))  15 ((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equial\$5 or similar or equival\$41)))) not ("20040089886" "6670658" "6495871"  Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equial\$5 or similar or equival\$41))) not ("20040089886" "6670658" "6495871"  Hattori-hidetaka.in. (("5895939").PN.) ((("\$895939").PN.) and ((impurity adj concentration)) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4661174"   "4783693").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) (4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) ("4967797"   "5173435"   "5173435"   "51701023"   "53789911"   "5173435"   "51701023"   "53789911"   "5173435"   "51701023"   "53789911"   "5173435"   "6011678"   "6169299"   "6238980"   "6303410").PN.) (6501128.URPN. (("5173435"   "6001678"					
"5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"   "6380586"   "6501128").PN.))  15 (((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) (("5895939").PN.) and (impurity adj concentration)) (("4967243"   "5471072"   "5543637").PN.) (("4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) (6495871.URPN.)) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) (a95871.URPN.)) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) ("4964049"   "5378991"   "5173435"   "517622"   "5173435"   "517622"   "5173435"   "517622"   "5173435"   "517622"   "5173435"   "616929"   "6328980"   "63037628"   "616929"   "628980"   "63037628"   "616929"   "628980"   "63037628"   "616929"   "628980"   "6303410").PN.)					
"5701023"   "5914503"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"   "6380586"   "6501128").PN.)) (((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equival\$4)))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (constant or equival\$4)))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (constant or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) ((("5895939").PN.) and ((impurity adj concentration)) or concentration) (("3967243"   "5471072"   "5543633").PN.) (("3391311"   "4441117"   "4783693").PN.) (("3391311"   "4441117"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) ("4967871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) "5701023"   "551762"   "5173435"   "5520449"   "5378911"   "554908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"		,			
"616929"   "6238980"   "6303410"].PN.) 6501128.URPN. (("5173435"   "6001678"   "6308506"   "6501128").PN.)) 15 (((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equival\$4)))) not ("2004008986" "6670658" "6495871" Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equi\$5 or similar or equival\$4))) not ("2004008986" "6670658" "6495871" Hattori-hidetaka.in. (("5695939").PN.) (("5895939").PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "47821795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emilter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5701023"   "5914503"   "6037628"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"					
- 6501128.URPN. (("5173435"   "6001678"   "6380586"   "6501128").PN.)) ((("TIGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) ((("5895939").PN.) and ((impurity adj concentration)) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "444117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "499075"   "5151762"   "5173435"   "5250449"   "5378911"   "545908"   "5701023"   "5914503"   "6303410").PN.) 6501128.URPN. (("5173435"   "6303410").PN.) 6501128.URPN. (("5173435"   "6303410").PN.)			l · · · · · · · · · · · · · · · · · · ·		
"6380586"   "6501128").PN.)) (((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) ((("5895939").PN.) and ((impurity adj concentration)) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) ["490975"   "5151762"   "5173435"   "5250449"   "5378911"   "55550489"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) (6501128.URPN. (("5173435"   "6001678"			"6169299"   "6238980"   "6303410").PN.)	·	
15					
bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) ((("5895939").PN.) and ((impurity adj concentration)) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration)) ("4972407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"			· · · · · · · · · · · · · · · · · · ·		
with (concentration with (constant or equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871"  Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871"  Hattori-hidetaka.in. (("5895939").PN.) (("5895939").PN.) ((("5895939").PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "444117"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration)) ("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"	-	15		USPAT;	•
equal\$5 or similar or equival\$4)))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) ((("5895939").PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"				US-PGPUB;	20:18
("20040089886" "6670658" "6495871"  Hattori-hidetaka.in. ((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871"  Hattori-hidetaka.in. (("5895939").PN.) ((("5895939").PN.) ((("5895939").PN.) and ((impurity adj concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration)) ("490975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5151762"   "5173435"   "6037628"   "6169299"   "6238980"   "6303410").PN.) (550128.URPN.) (("5173435"   "6001678"			with (concentration with (constant or	EPO; JPO;	
Hattori-hidetaka.in. (((((("IGBT" or (insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) ((("5895939").PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration)) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"				IBM_TDB	
(insulat\$3 adj gate adj bibolar adj transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) ((("5895939").PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4783693").PN.) (("3391311"   "4441117"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "55545908"   "57701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"			("20040089886" "6670658" "6495871"		
transistor)) and (channel with (concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) ((("5895939").PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("339131"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) and trench) ("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"			Hattori-hidetaka.in. ((((("IGBT" or		
(concentration with (constant or equal\$5 or similar or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) ((("5895939").PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"		1	(insulat\$3 adj gate adj bibolar adj		
or similar or equival\$4))) not ("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) ((("5895939").PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "55173435"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"			transistor)) and (channel with		
("20040089886" "6670658" "6495871" Hattori-hidetaka.in. (("5895939").PN.) ((("5895939").PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"			(concentration with (constant or equal\$5		
Hattori-hidetaka.in. (("5895939").PN.) ((("5895939").PN.) and ((impurity adj concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) [ "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"					
((("5895939").PN.) and ((impurity adj concentration)) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) [ "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "57701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"	1				
concentration) or concentration)) (("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"			1		
(("4967243"   "5471072"   "5543637").PN.) (("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "551762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"	1				
(("3391311"   "4441117"   "4521795"   "4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"			concentration) or concentration))		
"4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration)) 6495871.URPN.)) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"			(("4967243"   "5471072"   "5543637").PN.)		
"4605948"   "4641174"   "4783693").PN.) 4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter) and (impurity adj concentration)) 6495871.URPN.)) and (gate and (collector or drain) and base and (emitter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"					
(base and drain and (source or emitter) and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"					
and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"			4967243.URPN. (Hattori-hidetaka.in. and		
6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"			(base and drain and (source or emitter)		İ
6495871.URPN.)) and (gate and (collector or drain) and base and (emiiter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"			and (impurity adj concentration)))	Ì	
or drain) and base and (emilter or source))) and (channel with (impurity adj concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.)   6501128.URPN. (("5173435"   "6001678"					
concentration))) and trench) (("4672407"   "4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"			or drain) and base and (emilter or		
"4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"			source))) and (channel with (impurity adj		1
"4990975"   "5151762"   "5173435"   "5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"			concentration))) and trench) (("4672407"		1
"5250449"   "5378911"   "5545908"   "5701023"   "5914503"   "6037628"   "6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"					
"6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"	}				
"6169299"   "6238980"   "6303410").PN.) 6501128.URPN. (("5173435"   "6001678"					
6501128.URPN. (("5173435"   "6001678"	1				1
	}				
[ "6380586"   "6501128").PN.))) and trench			"6380586"   "6501128").PN.))) and trench	1	

- 7	((((("IGBT" or (insulat\$3 adj gate adj	USPAT;	2004/07/11
	bibolar adj transistor)) and (channel	US-PGPUB;	20:24
	with (concentration with (constant or	EPO; JPO;	
	equal\$5 or similar or equival\$4))))) not	IBM TDB	
	("20040089886" "6670658" "6495871"	_	
	Hattori-hidetaka.in. ((((("IGBT" or		
	(insulat\$3 adj gate adj bibolar adj		
	transistor)) and (channel with		-
	(concentration with (constant or equal\$5		
	or similar or equival\$4)))) not		İ
	("20040089886" "6670658" "6495871"		
	Hattori-hidetaka.in. (("5895939").PN.)		
	((("5895939").PN.) and ((impurity adj		
	concentration) or concentration))		
	(("4967243"   "5471072"   "5543637").PN.)		
	(("3391311"   "4441117"   "4521795"		
	"4605948"   "4641174"   "4783693").PN.)		
	4967243.URPN. (Hattori-hidetaka.in. and		J
	(base and drain and (source or emitter)		
	and (impurity adj concentration)))		
	6495871.URPN.)) and (gate and (collector		
	or drain) and base and (emiiter or		
	source))) and (channel with (impurity adj		j
	concentration))) and trench) (("4672407"		
	"4990975"   "5151762"   "5173435"		
	"5250449"   "5378911"   "5545908"		1
	"5701023"   "5914503"   "6037628"		
	"6169299"   "6238980"   "6303410").PN.)		}
	6501128.URPN. (("5173435"   "6001678"		
	"6380586"   "6501128").PN.))) and trench)		
	and ((source or emitter) and base and		1
	(collector or drain))		

	004/07/11
bibolar adj transistor)) and (channel   US-PGPUB;   20	0:24
with (concentration with (constant or EPO; JPO;	0:24
equal\$5 or similar or equival\$4))))) not IBM TDB	
("20040089886" "6670658" "6495871"	
Hattori-hidetaka.in. ((((("IGBT" or	
(insulat\$3 adj gate adj bibolar adj	
transistor)) and (channel with	
(concentration with (constant or equal\$5	141
or similar or equival\$4)))) not	
("20040089886" "6670658" "6495871"	
Hattori-hidetaka.in. (("5895939").PN.)	
((("5895939").PN.) and ((impurity adj	
concentration) or concentration))	
(("4967243"   "5471072"   "5543637").PN.)	
(("3391311"   "4441117"   "4521795"	
"4605948"   "4641174"   "4783693").PN.)	
4967243.URPN. (Hattori-hidetaka.in. and (base and drain and (source or emitter)	
and (impurity adj concentration)))	
6495871.URPN.)) and (gate and (collector	
or drain) and base and (emitter or	
concentration))) and trench) (("4672407"	
"4990975"   "5151762"   "5173435"	
"5250449"   "5378911"   "5545908"	
"5701023"   "5914503"   "6037628"	
"6169299"   "6238980"   "6303410").PN.)	
"6380586"   "6501128").PN.))) and trench)	
not (((((("IGBT" or (insulat\$3 adj gate	
adj bibolar adj transistor)) and (channel	
with (concentration with (constant or	
equal\$5 or similar or equival\$4))))) not	
("20040089886" "6670658" "6495871"	
Hattori-hidetaka.in. (((((("IGBT" or	
(insulat\$3 adj gate adj bibolar adj transistor)) and (channel with	
(concentration with (constant or equal\$5	
or similar or equival\$4)))) not	
("20040089886" "6670658" "6495871"	
Hattori-hidetaka.in. (("5895939").PN.)	
((("5895939").PN.) and ((impurity adj	
concentration) or concentration))	
(("4967243"   "5471072"   "5543637").PN.)	
(("3391311"   "4441117"   "4521795"	
"4605948"   "4641174"   "4783693").PN.)	
4967243.URPN. (Hattori-hidetaka.in. and	
(base and drain and (source or emitter)	
and (impurity adj concentration))) 6495871.URPN.)) and (gate and (collector	
or drain) and base and (emitter or	
concentration))) and trench) (("4672407"	
"4990975"   "5151762"   "5173435"	
"5250449"   "5378911"   "5545908"	
"5701023"   "5914503"   "6037628"	
"6169299"   "6238980"   "6303410").PN.)	4
"6380586"   "6501128").PN.))) and trench)	
and ((source or emitter) and base and	
(collector or drain)))	

				·
-	7	(((((("IGBT" or (insulat\$3 adj gate adj	USPAT;	2004/07/11
		bibolar adj transistor)) and (channel	US-PGPUB;	20:24
		with (concentration with (constant or	EPO; JPO;	
		equal\$5 or similar or equival\$4))))) not	IBM TDB	
		("20040089886" "6670658" "6495871"	<u> </u>	
		Hattori-hidetaka.in. ((((("IGBT" or		
1		(insulat\$3 adj gate adj bibolar adj		
		transistor)) and (channel with		
1		(concentration with (constant or equal\$5		
		or similar or equival\$4)))) not		
		("20040089886" "6670658" "6495871"		
		Hattori-hidetaka.in. (("5895939").PN.)		
		((("5895939").PN.) and ((impurity adj		
		concentration) or concentration))		
		(("4967243"   "5471072"   "5543637").PN.)		
	i	(("3391311"   "4441117"   "4521795"		
		"4605948"   "4641174"   "4783693").PN.)		
		4967243.URPN. (Hattori-hidetaka.in. and		
		(base and drain and (source or emitter)		
		and (impurity adj concentration)))		
		6495871.URPN.)) and (gate and (collector		
	1	or drain) and base and (emilter or		
		source))) and (channel with (impurity adj		
		concentration))) and trench) (("4672407"		
		"4990975"   "5151762"   "5173435"		
		"5250449"   "5378911"   "5545908"		
		"5701023"   "5914503"   "6037628"		
		"6169299"   "6238980"   "6303410").PN.)		
		6501128.URPN. (("5173435"   "6001678"		
		"6380586"   "6501128").PN.))) and trench)		
1		not ((((("IGBT" or (insulat\$3 adj gate		
1		adj bibolar adj transistor)) and (channel		
		with (concentration with (constant or		
		equal\$5 or similar or equival\$4))))) not		
		("20040089886" "6670658" "6495871"		
		Hattori-hidetaka.in. ((((("IGBT" or		
		(insulat\$3 adj gate adj bibolar adj	÷	
		transistor)) and (channel with		
ľ		(concentration with (constant or equal\$5		Į
		or similar or equival\$4)))) not		
		("20040089886" "6670658" "6495871"		
		Hattori-hidetaka.in. (("5895939").PN.)		
1		((("5895939").PN.) and ((impurity adj		
		concentration) or concentration))		
		(("4967243"   "5471072"   "5543637").PN.)		
		(("3391311"   "4441117"   "4521795"		
		"4605948"   "4641174"   "4783693").PN.)		
		4967243.URPN. (Hattori-hidetaka.in. and		
1		(base and drain and (source or emitter)		
		and (impurity adj concentration)))	1	
		6495871.URPN.)) and (gate and (collector		
1		or drain) and base and (emitter or		
		source))) and (channel with (impurity adj		
		concentration))) and trench) (("4672407"		
		"4990975"   "5151762"   "5173435"		
		"5250449"   "5378911"   "5545908"		
		"5701023"   "5914503"   "6037628"		
		"6169299"   "6238980"   "6303410").PN.)		
		6501128.URPN. (("5173435"   "6001678"		
		"6380586"   "6501128").PN.))) and trench)		·
		and ((source or emitter) and base and		
		(collector or drain)))) and (impurity adj		
L		concentration)	L	

	1/////UTCDMU on /inculate2 add mate add	I IICDAM.	12004/07/11
-   2	''''	USPAT;	2004/07/11
	bibolar adj transistor)) and (channel	US-PGPUB;	20:51
	with (concentration with (constant or	EPO; JPO;	
	equal\$5 or similar or equival\$4))))) not	IBM_TDB	
	("20040089886" "6670658" "6495871"		
	Hattori-hidetaka.in. ((((("IGBT" or		
	(insulat\$3 adj gate adj bibolar adj		
	transistor)) and (channel with		
	(concentration with (constant or equal\$5		
	or similar or equival\$4)))) not		<u> </u>
	("20040089886" "6670658" "6495871"		
	Hattori-hidetaka.in. (("5895939").PN.)		
	((("5895939").PN.) and ((impurity adj		
1	concentration) or concentration))		
	(("4967243"   "5471072"   "5543637").PN.)		
	(("3391311"   "4441117"   "4521795"		
	"4605948"   "4641174"   "4783693").PN.)		
	4967243.URPN. (Hattori-hidetaka.in. and		
	(base and drain and (source or emitter)		
	and (impurity adj concentration)))		ļ
	6495871.URPN.)) and (gate and (collector		
	or drain) and base and (emitter or		
	source))) and (channel with (impurity adj		
·	concentration))) and trench) (("4672407"		
	"4990975"   "5151762"   "5173435"		
	"5250449"   "5378911"   "5545908"		
1			
	"5701023"   "5914503"   "6037628"		
	"6169299"   "6238980"   "6303410").PN.)		
	6501128.URPN. (("5173435"   "6001678"		
	"6380586"   "6501128").PN.))) and trench)		
	not (((((("IGBT" or (insulat\$3 adj gate		j ·
	adj bibolar adj transistor)) and (channel		
	with (concentration with (constant or		
	equal\$5 or similar or equival\$4))))) not		
	("20040089886" "6670658" "6495871"		
	Hattori-hidetaka.in. ((((("IGBT" or		
	(insulat\$3 adj gate adj bibolar adj		
=	transistor)) and (channel with	*	
	(concentration with (constant or equal\$5		
	or similar or equival\$4)))) not		
	("20040089886" "6670658" "6495871"		
	Hattori-hidetaka.in. (("5895939").PN.)		
	((("5895939").PN.) and ((impurity adj		
	concentration) or concentration))		
	(("4967243"   "5471072"   "5543637").PN.)		
	(("3391311"   "4441117"   "4521795"		
	"4605948"   "4641174"   "4783693").PN.)		
	4967243.URPN. (Hattori-hidetaka.in. and		
	(base and drain and (source or emitter)	•	
	and (impurity adj concentration)))		
	6495871.URPN.)) and (gate and (collector		
	or drain) and base and (emiiter or		
	source))) and (channel with (impurity adj		
	concentration))) and trench) (("4672407"		
	"4990975"   "5151762"   "5173435"		1
	"5250449"   "5378911"   "5545908"		
	"5701023"   "5914503"   "6037628"		
	"6169299"   "6238980"   "6303410").PN.)		
	6501128.URPN. (("5173435"   "6001678"		
	"6380586"   "6501128").PN.))) and trench)		
	and ((source or emitter) and base and		
	(collector or drain)))) and (impurity adj		
	concentration)) and (concentration near2		
	(equal\$4 or constant or substantial\$4))		
L	(eduation of compraint of publiciation))	1	1

			·	
-	8	((((("IGBT" or (insulat\$3 adj gate adj	USPAT;	2004/07/11
		bibolar adj transistor)) and (channel	US-PGPUB;	20:51
		<pre>with (concentration with (constant or equal\$5 or similar or equival\$4)))) not</pre>	EPO; JPO;	
		("20040089886" "6670658" "6495871"	IBM_TDB	
		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		
		(insulat\$3 adj gate adj bibolar adj		
		transistor)) and (channel with		
		(concentration with (constant or equal\$5		
		or similar or equival\$4)))) not		
		("20040089886" "6670658" "6495871"		
		Hattori-hidetaka.in. (("5895939").PN.)		
İ		((("5895939").PN.) and ((impurity adj		
		concentration) or concentration))		
		(("4967243"   "5471072"   "5543637").PN.)		
		(("3391311"   "4441117"   "4521795"		
İ		"4605948"   "4641174"   "4783693").PN.)		
		4967243.URPN. (Hattori-hidetaka.in. and		
		(base and drain and (source or emitter)		
		and (impurity adj concentration)))		
		6495871.URPN.)) and (gate and (collector		
		or drain) and base and (emitter or		
		source))) and (channel with (impurity adj		
		concentration))) and trench) (("4672407"		
		"4990975"   "5151762"   "5173435"		
		"5250449"   "5378911"   "5545908"     "5701023"   "5914503"   "6037628"		
		"6169299"   "6238980"   "6303410").PN.)		
		6501128.URPN. (("5173435"   "6001678"		
		"6380586"   "6501128").PN.))) and trench)	1	
		not ((((("IGBT" or (insulat\$3 adj gate		
		adj bibolar adj transistor)) and (channel		
		with (concentration with (constant or		
		equal\$5 or similar or equival\$4))))) not		
		("20040089886" "6670658" "6495871"		
		Hattori-hidetaka.in. ((((("IGBT" or		
		(insulat\$3 adj gate adj bibolar adj		
		transistor)) and (channel with		
		(concentration with (constant or equal\$5		
		or similar or equival\$4)))) not ("20040089886" "6670658" "6495871"		
		Hattori-hidetaka.in. (("5895939").PN.)		
		((("5895939").PN.) and ((impurity adj		
		concentration) or concentration))		
		(("4967243"   "5471072"   "5543637").PN.)		
		(("3391311"   "4441117"   "4521795"		
		"4605948"   "4641174"   "4783693").PN.)		
		4967243.URPN. (Hattori-hidetaka.in. and		
<u> </u>		(base and drain and (source or emitter)		
		and (impurity adj concentration)))		,
		6495871.URPN.)) and (gate and (collector		`
		or drain) and base and (emilter or		
		source))) and (channel with (impurity adj concentration))) and trench) (("4672407"		
		"4990975"   "5151762"   "5173435"		
		"5250449"   "5378911"   "5545908"		
		"5701023"   "5914503"   "6037628"		
		"6169299"   "6238980"   "6303410").PN.)		
		6501128.URPN. (("5173435"   "6001678"		
		"6380586"   "6501128").PN.))) and trench)		
		and ((source or emitter) and base and		
		(collector or drain)))		ĺ